神経社会学

大塚いわお

NEUROSOCIOLOGY

Iwao Otsuka

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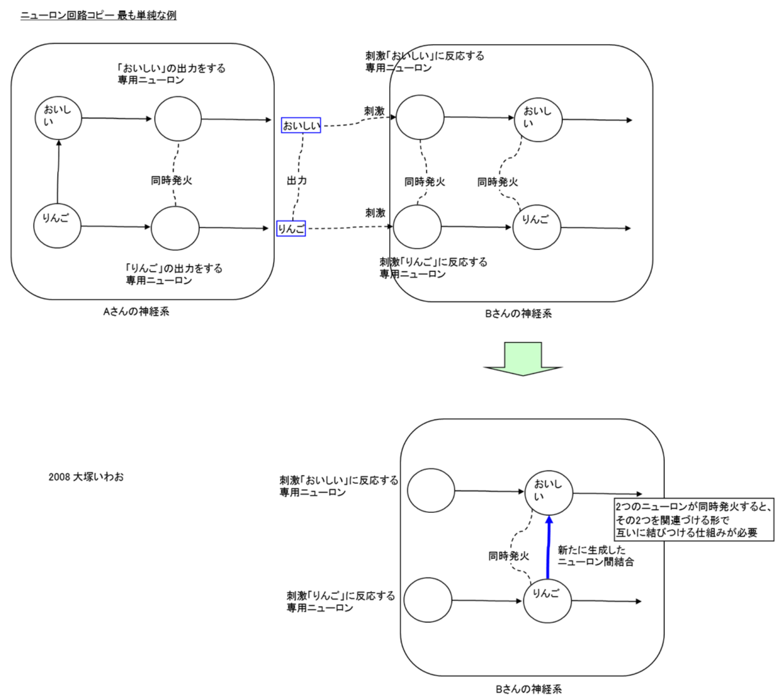
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ニューロン回路コピー 最も単純な例
「おいしい」の出力をする
専用ニューロン
おいしい
りんご
同時発火
「りんご」の出力をする
専用ニューロン
Aさんの神経系
おいしい
出力
りんご
刺激「おいしい」に反応する
専用ニューロン
刺激
刺激
同時発火
同時発火
おいしい
りんご
刺激「りんご」に反応する
専用ニューロン
Bさんの神経系
2008 大塚いわお
刺激「おいしい」に反応する
専用ニューロン
おいしい
2つのニューロンが同時発火すると、
その2つを関連づける形で
互いに結びつける仕組みが必要
同時発火
新たに生成した
ニューロン間結合
刺激「りんご」に反応する
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ニューロンマップ
Neuron Map

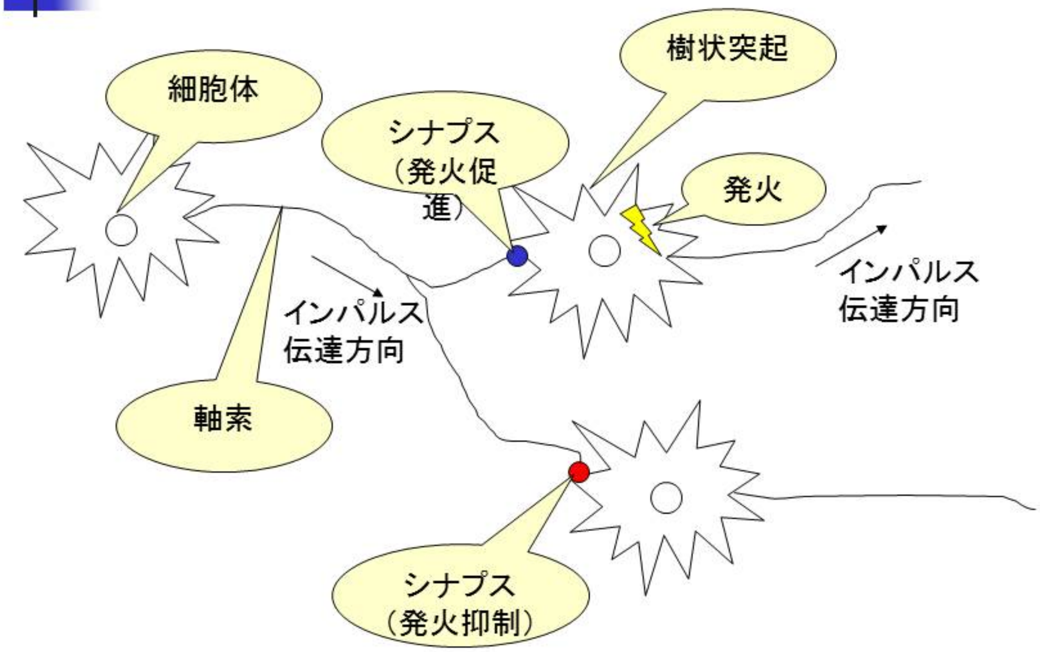
2009年10月

大塚いわお

ニューロンマップとは

- 人間は脳神経系で思考する。
- 人間の思考、知恵を整理すると、脳神経系のニューロン回路状になる。
- 文章等のアイデアをまとめるには、アイデア同士の関連をニューロン回路状に記述した図にすることが有効である。
- この図は、「ニューロンマップ」と呼べる。

ニューロン回路



ニューロンマップの書き方

- (1)思考の内容を、1つずつ個別に、セルの中に記入する。
  - 客観的事実と、主観的意見・感情(意思、価値判断)に分けて記述する。
  - 客観的事実は、
    - 自分にとってプラスになるもの(助かる、役に立つ・・・)
    - マイナスになるもの(困る、問題である、障害となる・・・)

    に分けて、色分けする。

  - 主観的意見・感情(意思、価値判断)は、
    - 正のポジティブなもの(～したい、良い、好き)
    - 負のネガティブなもの(～したくない、嫌だ、ダメ、嫌い)

    に分けて、色分けする。

  - 内容を、自分にとっての重要度に応じて、色の濃淡を、濃い(重要)～淡い(重要でない)と付ける。

  - 客観的事実、主観的意見・感情共に、それが
    - 自分個人のもの
    - 他者のもの

    に分けて、印を付ける。

- (2)セル同士を、線(軸索に相当)で、結合(シナプスに相当)させて結ぶ。
  - 線の種類は、
    - 因果　一方向「それゆえ」「だから」
    - 関連、相関　双方向

    に分けて、記入する。

    - 促進　行き先に当たるセルを活性化する、発火させる
    - 抑制　行き先に当たるセルの活動を抑制して、発火させない

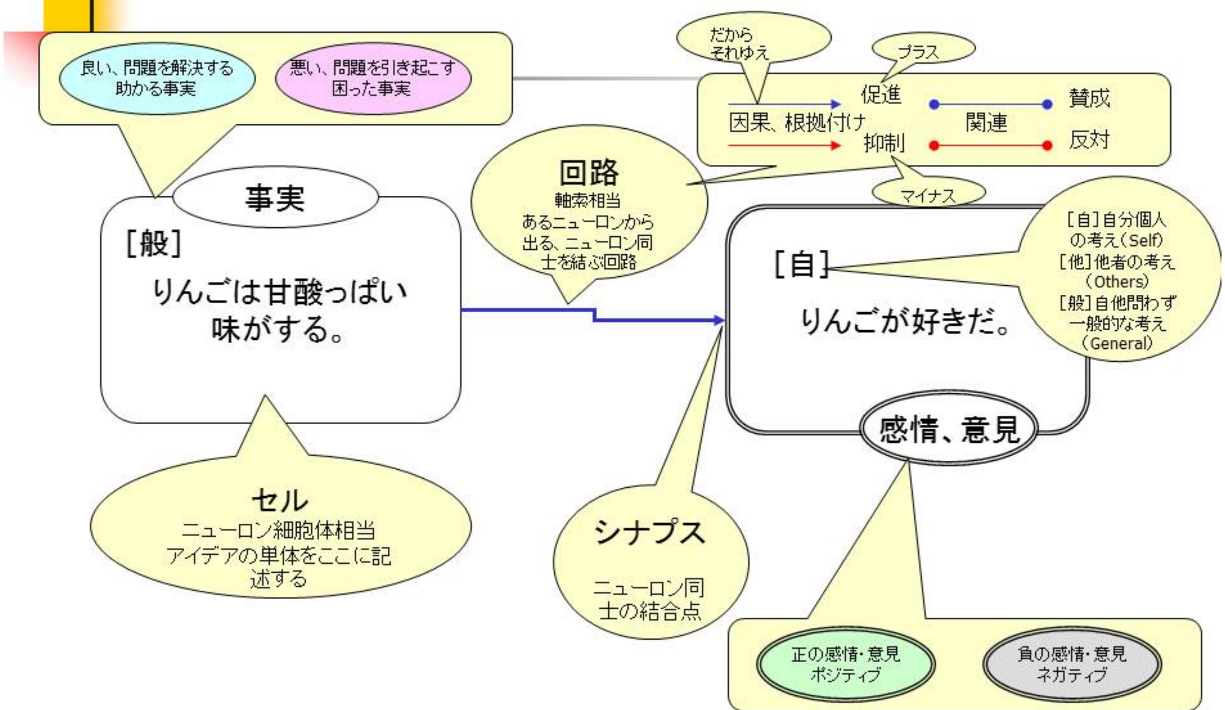
    に分けて記入する。

ニューロンマップ作成に必要なソフト

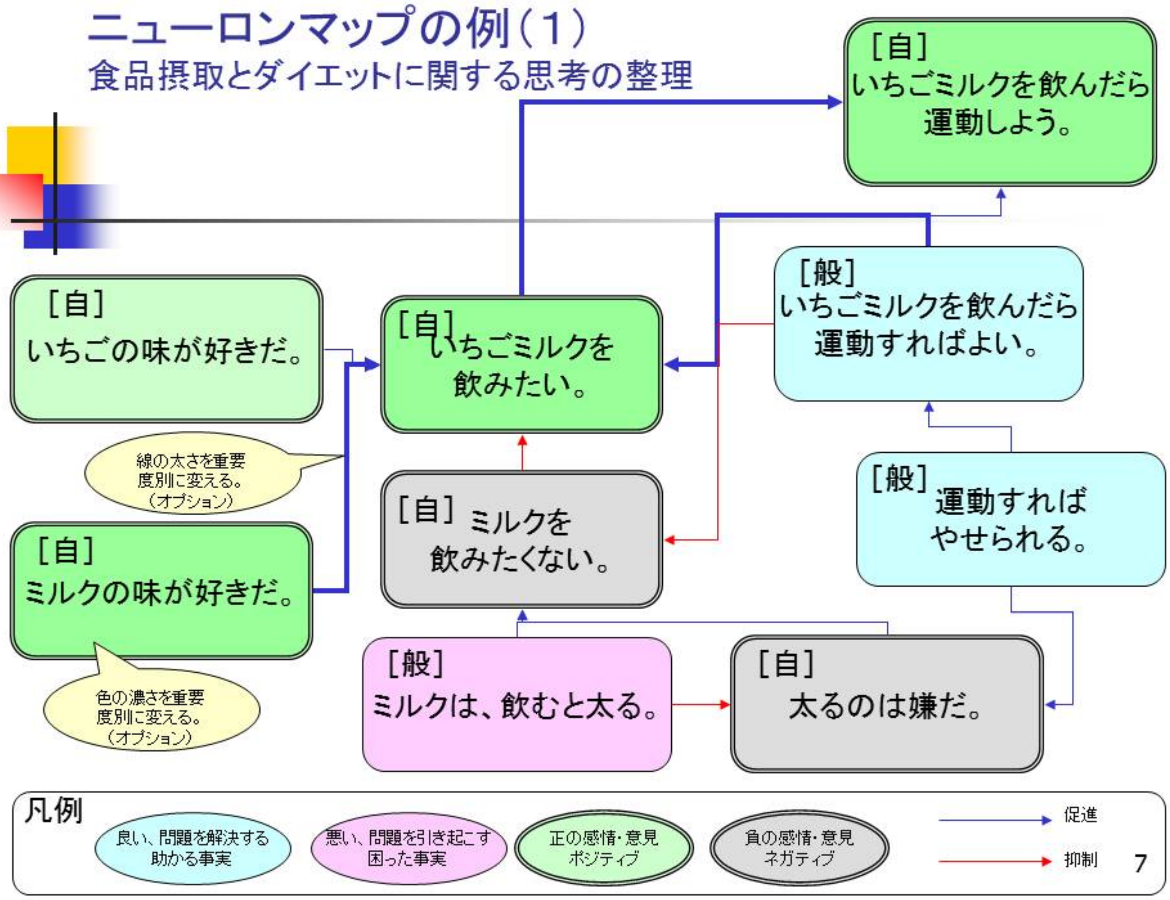
- 以下の機能の図形描画を備えたソフトなら何でもOK
  - 四角形が書ける
  - 四角形同士を結ぶコネクタ線が書ける
  - 図形、線の色を調節できる
  - 図形、線の太さを調節できる
  - 図形、線の模様を調節できる

- 作成が可能なソフトの例
  - Microsoft Excel、Microsoft PowerPoint
  - OpenOffice Impress

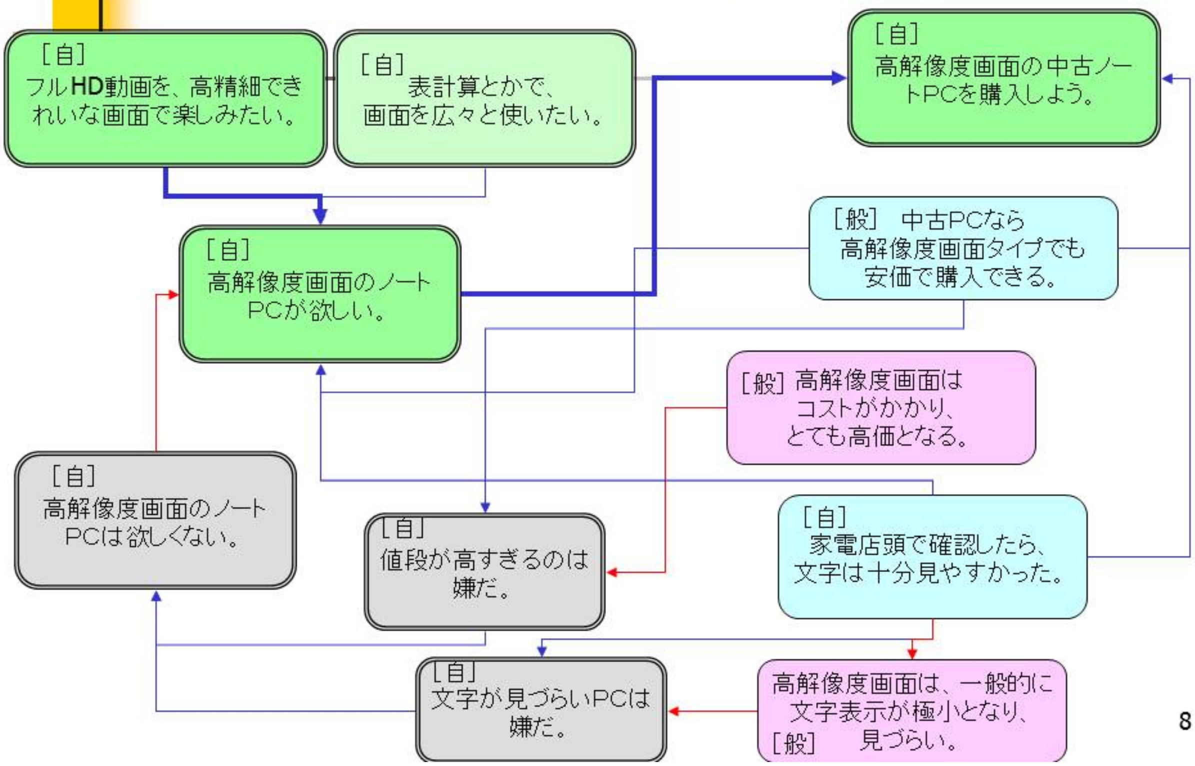
ニューロンマップの書式



ニューロンマップの例（1）
食品摂取とダイエットに関する思考の整理



ニューロンマップの例（2）
高解像度画面ノートPC購入に関する消費者の思考の整理



ニューロンマップを記述するメリット

- ニューロンマップを描くことで、自分が頭の中で抱いている思考内容が整理され、他人に対して理路整然と説明しやすくなる。文章等にまとめやすくなる。
  - 自分の考えの中の何が自分にとってプラスで、何がマイナスなのか整理、明確化できる。
  - 自分の考えの中の何が感情、主観的意見で、何が客観的事実なのか、整理、区別して主張できるようになる。
  - 自分の考えの中で何が困った問題で、何が解決策なのか、それらと自分の意見との関連はどうなっているのかの流れを明らかにできる。
  - 自分の抱く好き嫌いの感情、ポジティブ・ネガティブな感情、「～したい、したくない」の意思、「○○が良い、悪い」の価値基準がどのようなものかを明らかにし、整理することができる。
  - 思考内容の相互関連、流れのあり方が明らかになり、自分の思考の流れを明瞭にし、文章化しやすくできる。
  - 論理だけでなく、自ら抱く感情の内容や流れについても明らかにすることができる。

ニューロンマップの利用用途例

- 心理カウンセリング支援
  - 患者の心の内面
    - 患者を取り巻く客観的事実、
    - それに対して患者の抱く内心の感情、意思
  - を明らかにし、整理して、
    - どのような処方をすれば、患者の助けになるか（あるいは逆効果か）
  - を理路整然と患者と共有できるようになる技法として役立つ。

- 各種製品開発支援
  - 製品を取り巻く会社内外の状況や人々の意思
    - 自分たちの会社を取り巻く市場に対する客観的認識
      - こういう製品が有用である、必要である
      - こういう製品は不要である、有害である
    - それに対して自分たちが抱く感情、意思
      - こういう製品が好きだ、良いという感情、
      - こういう製品を作りたいという意思
  - を、理路整然と整理して、
    - 会社内外のキーパーソン
    - 製品を購入する消費者
  - に提示できるようにする手法として役立つ。

ニューロンマップの今後

- 人間の脳内ニューロン回路の解明と図示
  - ニューロンマップを書くことで、人間の脳内に展開されているニューロン回路がどうなっているのかを推定できる。
  - 脳神経系のソフトウェアの解明に役立つ。
  - 知的、論理的側面だけでなく、感情、意思の側面についても、ニューロン回路がどうなっているかを解明できるのではないか？

- 人類の知的資産の内容整理とライブラリ化
  - 過去の様々な文献に書かれている内容の図示化を促進する。
  - 著者の持つ様々な知識と、抱いている感情、価値判断を、見やすく分かりやすく整理する。
  - 例えば、過去の偉大な文献の内容整理、見直しに有効か。

- ニューロンマップと自動文章生成
  - 図上のニューロンをクリックすると、発火して、インパルスが次々と伝達していくようにする。
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Neurosociology -Brain and Nervous System (Neural Network) and Society and Culture-

1987 (first edition) , 1999-2006 (second edition) 2018 (third edition) Iwao Otsuka

◆ Summary

This site introduces a new neuro-physiological and psychological perspective in explaining how human society and culture should be. He considers the essence of humans to be in the activities of the (brain) nervous system, and proposes a view that views society as an accumulation of nervous systems or exchanges of neural circuits between nervous systems.

[Author's Note] The content of this site is based on what was once created in the form of an essay about 1987 (when I was in college) . From around 1999 , I reworked it to make it more detailed in relation to sociological theories (social structure, communication theory, etc.) .

◆ Basic -Sociology-

1987-2006 first appearance

Minimum unit of action

● Synapses as behavioral elements

In human behavior, the function of the nervous system is main. Now that the idea of brain death (the cessation of nervous system activity) as human death has become

widespread, it is considered that only the nervous system is sufficient to consider the relationship between human behavior and social composition.

The nervous system responsible for human behavior, neurons (nerve cells) chain-network of (neural networks) as well as, be captured. Human individuals are perceived as giant neuro-computers.

Human psychology can be regarded as a set of interactions between neurons, and in that regard, psychology can be called "sociology of neurons".

Behavior (broad definition) can be said to be an activity in which an impulse dynamically transmits on a neuron wiring statically connected by a synapse in the brain nervous system.

Action (narrow sense) , the sensory cortex - association cortex - a portion in contact with the outside world in the nervous system that is differentiated motor area, the neural network of sensory and motor cortex, activated by the transmission of the impulse, and movement on the appearance of the body It is caught.

Thinking can be said to be the part of the activity of the impulse that is dynamically transmitted on the neuron wiring in the cerebral nervous system that is not output to the outside through the motor cortex but continues internally.

From the aspect of activation (presence of impulse passage) ,

(1) Corresponds to the action that occurs, the active impulse passes

(2) Inactive impulse does not pass, does not respond to the behavior that occurs

are categorized.

When human behavior patterns are reduced to neural network activities, the behavior patterns are determined by the chain of connections between neurons, and human behavior has been decomposed from a micro perspective. The root, however, is thought to be at the synapse, which determines how to connect one neural network to another part of the neural network.

Therefore, it can be considered that the “behavioral mode element (the minimum unit that determines the behavioral mode of a human being or an organism in the nervous system) ” is a synapse that controls the sign, strength, and strength of the connection between neurons.

The human brain and nervous system can be regarded as a pool of various genetic and acquired behaviors, such as pools of behaviors.

◇ Relationship with society

● social 2 different perceptions

When society focuses on the function of the individual nervous system, it can be understood as connection, cooperation, and solidarity by communication between nervous systems of each individual, or interaction between individual nervous systems. Here, it is considered that the neural circuit group inside each person's nervous system is in a state of being copied from the nervous system of others around.

Apart from the above, society can also be considered as a huge nervous system as a sum of the brain and nervous system of each person = super nervous system. From this point of view, the individual's nervous system is fused into one big crucible called the whole society. In other words, the whole society is considered as a single integrated neural network or neurocomputer consisting of a huge sensory area, association area, and motor area.

Because of these differences in perspective, the way of thinking of society is

a. Whether the viewpoint is micro or macro

(1) Perceptions that the viewpoint is suitable for the activities of the nervous system of each individual who constitutes society

(2) Perspective from a bird's-eye view of society

b. Separation of individuals and society

(1) Method of distinguishing and confronting individuals and society as different things

(2) A method in which individuals are integrated and integrated into society (a huge nervous system) and regarded as inseparable

That 2 there are ways, and it can be said.

In the microscopic view of society, the functioning of the individual's nervous system is considered as the center, and there are cases where the society only has the function of connecting the nervous systems with each other, and the interaction and interaction between individual nervous systems is performed. The focus is on society as it is.

In the macroscopic view of society, culture can be thought of as a product of society as an integrated body of the individual nervous system. The creation of a new culture is regarded as an event of the creation of a partial neural circuit in the huge nervous system of the whole society. The phenomenon of dissemination and expansion of the created culture corresponds to the strengthening of the neural circuit corresponding to the culture in the whole society (to be thick and durable, increasing the number of lines) .

◆ Macro neurosociology

1987 (first edition) , 1999-2006 (second edition) first appearance

● Definition of the whole society

The whole society can be regarded as the total of networks in which each person's neural network is crushed one by one and the same parts are overlapped with each other.

By performing the work of crushing each person's network and adding the same parts to the neural network of all humans on the earth that are related to each other, one overall, it is completely close to human environmental adaptation, Form a huge neural network. That is the whole society.

The whole society in this case is a single integrated neural network consisting of a huge sensory area, an association area, and a motor area.

The structure of the nervous system of the whole society in this case is similar to the structure of the nervous system of one human. This is because the sum of the structures of the

nervous system of each person directly forms the structure of the nervous system of the whole society.

The sum of each person's nervous system = neural network becomes the whole society. For example, the sum of the visual circuits of each person is the "eye" of the whole society. If the world's population is 5 billion, then the whole society can be viewed as a "superman" with 10 billion eyes.

The whole society can be regarded as one large nervous system with a large sensory area, association area, and motor area = hyper nervous system, or actor.

● Definition of groups and organizations

A group or organization, which is a group of smaller humans compared to the whole society, can be regarded as the sum of the brain nervous system = neural network of each of the constituents, similarly to the whole society. In other words, a group or organization composed of a plurality of persons is regarded as a group of large nervous systems (hypernervous system) and actors having integrated sensory areas, association areas, and motor areas, like one human.

For example, company organization, number of employees is 500 , if people, 1000 is regarded as a "superhuman" with a single eye.

● Social structure and stability of neural circuits

Social structure refers to a stable, stable part of social relations. This is considered to correspond to the sum of the hard-to-change stationary parts in the neural network of each of the members of the society.

● Social change

Changes in the whole society can be understood as changes in the plastic part of the total of the neural network of each individual.

Changes in an individual's psychological system are caused by a large change in wiring between neurons. It is considered that the fluctuation of the neuron wiring of each individual leads to the fluctuation of the social level.

When social change occurs, it is considered that the pattern of the neural network (the structure of the nervous system) of each of the members of the society has changed significantly.

● Dispute

Conflict occurs when humans have coexisting neural networks in which the promotion / suppression relations of specific parts are reversed in a huge neural network that constitutes the whole society .

Conflict in society (conflict) is in a huge neural circuits constituting the whole society, there is a portion related promotion-suppression is opposite, portions between the opposite is inconsistent, each other's It is caused by transmitting impulses that cancel each other. Within the whole society, it causes exhaustion by canceling impulse.

● Supervisor / subordinate relationships in the organization

When bureaucratic organizations are viewed as one large nervous system, the relationship between bosses and subordinates is connected in a divergent branch. In this case, the neural network corresponding to the boss located at the center of the organization corresponds to the job content that is more abstract and comprehensive and far from the field, while the neural circuit corresponding to the

subordinate located at the end of the tissue is Respond to more specific, trivial and near-field job descriptions. Therefore, from the perspective of social organization, neural circuits

(1) Center, core

(2) Peripheral, terminal

Of 2 it can be divided into ways.

The network part that directly receives the stimulus coming from the outside world is the network corresponding to subordinates, and this network part analyzes the stimulus coming from the outside world and reduces the amount of information. Then, the analyzed impulse contents are transferred to the network portion corresponding to the boss's human share. When it is determined that the amount of impulse information is sufficiently reduced at the portion of the user's share, and it is determined that there is no need to specifically report to the supervisor, the transmission of the impulse stops there.

If the information received in the subordinate stage neural network part is transmitted to the supervisor stage network,

(1) A large amount of information (new and rarely ever)

(2) High importance in environmental adaptation (related to human life and death, related to organizational survival)

Such a case is conceivable.

● Consideration for the isolated

The whole society depends on whether or not an isolated person is added to the human society.

(1) Add only neural networks between people with interaction

(2) Include neural networks of isolated people without interaction

There are two ways of understanding.

In this case, the orphan is rarely a wolf boy or girl who had no connection with human society from the beginning, and as in the story of Robinson Crusoe, was originally a member of human society and promoted human culture. It is common to think that the person who shared it has been isolated from others for some reason or has voluntarily cut off contact with society. They capture human culture in their nervous systems, and their unique experiences have the potential to be re-distributed after re-contacting the rest of the society. In this case, it is more convenient to regard it as a member of human society.

Alternatively, a group of minorities who have escaped from a large crowd may form their own culture completely isolated from human society. In that case, there will be the idea that their own society should be added to the total society.

In this respect, it is considered more convenient for the whole society to include the isolated people in (2) .

● Total of non-plastic and plastic parts

The neural network has a non-plastic part (corresponding to a semiconductor ROM) whose wiring is predetermined by genetics , and a plastic part (corresponding to a semiconductor RAM) whose wiring can be acquired (culturally) changed. There is. The whole society is considered to exist in a form that includes both genetic (non-plastic) and cultural (plastic) networks.

◆ Micro neurosociology

◇ Social concept

1987-2009 first appearance

● Society as a connector between personal nervous systems

When society focuses on the work of the individual's nervous system,

(1) Connection, cooperation, and solidarity by communication between nervous systems of each person, or interaction between individual nervous systems

(2) An aggregate of the nervous system of each person

Can be considered as

From the perspective of (1) , society can only properly distribute the neural circuits created within individuals that are effective for environmental adaptation to multiple other human nervous systems (who do not yet have those circuits). It is just a means to make it happen. Society can be viewed as a bridge / connector that connects the nervous systems of each individual = the “heart”.

In other words, society can be viewed as a collection of interactions between individual nervous systems and exchanges of neural circuits per se from a micro perspective. Humans can be regarded as a kind of neurocomputer in terms of engineering, and it can be said that in the modern human society, giant neurocomputers form a large group and interact and communicate at the same time.

When culture is perceived as information that can be converted into the form of a neural circuit, communication can be perceived as a state in which culture flows over society as a passage. Society can be viewed as a collection of neural circuits = channels through which cultures circulate.

According to (2) , society is viewed as an aggregate of the individual's nervous system = "heart". Society cannot exist without the individual's "heart" = nervous system. In that regard, a neuropsychological perspective is essential to capture society. In other words, " (nerve) psychological sociology" is needed. In such a case, as in the current sociology, the view that society exists independently of the psychology of the individual and is a unique entity that transcends the personal psychology will not hold.

Also, from the idea of (2) that the aggregate of the individual's nervous system activities and psychology is a society, society can be regarded as including the psychology of the individual, and society can be considered as a group of multiple to many individuals. It can be said that this is a high-level concept that collects and aggregates psychology.

In that regard, sociology can be said to be a higher-level discipline involving psychology and neuroscience. Frankly speaking, psychology is a servant of sociology. Or, at the top of neuropsychology is neurosociology.

This is the same as having a higher rank in the organization for managers who aggregate and manage them collectively than individual general employees in the company.

Sociology, as in the past, has been stalled in the way of excluding the inner psychology of individuals and focusing on the interaction between individuals, so to respond to future advances in neuroscience, the psychology of individuals Should be reconstructed from the perspective of

incorporating, incorporating, and organizing nervous system activities.

◇ Socialization and the nervous system

1987-2006 first appearance

◇ About circuit generation

● Basic of circuit generation

Generation of a new neural network, 2 based on the co-occurrence of two different stimuli. For example, a person who has eaten an apple simultaneously produces both the visual and tactile stimulus given by the "apple" in his hand and the taste stimulus of "delicious". As a result, the neurons corresponding to the "delicious" and the neuron corresponding to the "apple" simultaneous onset and fire, between the two of neurons, leading to new bonds = circuit generation.

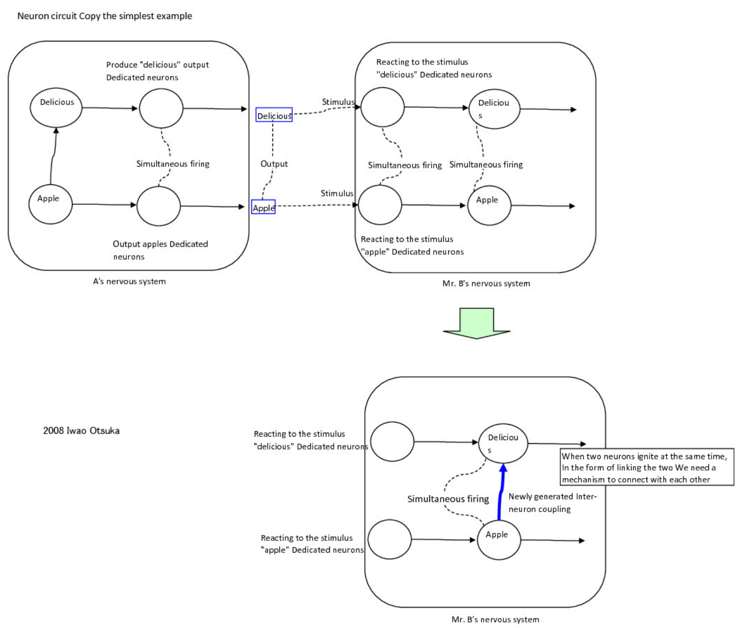
● Basic of circuit copy

Copying between human nervous circuitry, the media, 2 information to be simultaneous occurrence of different stimuli encode put in, sent into the opponent's nervous system decode is, as a result, the counterpart of the nervous system It is performed by connecting neurons that correspond to the two corresponding stimuli. For example, put to eat an apple person you feel arbitrariness (the "apple" of the neuronal connections between "delicious", the person who was obtained in actually eat it) will be communicated in words and to the other party "apple is delicious" (through, the stimulation of "" apple "," delicious ", and the picture of the" apple ", to co-occur by the mouth-watering face) . Then, in the opponent's mind is, "apple", "delicious" of 2 between the two are bonded neurons to each

other, which corresponds to one of the stimuli to simultaneous firing, as a result, in his nervous system, the same as the transmission source of the people The circuit has been copied.

In the above case, there must be something inside the nervous system of the transmitter, such as an active communication intention and motivation to transmit the taste of the apple to others. This intention to communicate is not always conscious, and may be conveyed to the other party with a facial expression that occurs unconsciously. In this regard, it is necessary to assume such things as a “decision (decision) field” and a “motivation field” in the nervous system .

It is a figure explaining the neural circuit copy .



Multi-stage theory of neural circuit generation (development with seed at the core)

In the generation of neural, first very basic elementary (hitting the dictionary definition) circuit is generated, these circuits as a springboard foundation, more sophisticated internal circuit corresponding to the information of the contents is generated. Already understood = the corresponding neural circuit is completed, and a more sophisticated neural circuit will be generated by a simple combination of information and symbols .

If elementary and basic circuits are not completed, circuits related to applied abilities cannot be created.

If you can't understand statistics if you can't do the four arithmetic operations with arithmetic, the four arithmetic

operations consist of basic circuits.Statistics is built on the basic circuits and applied It is considered to be the part of the circuit to be done.

In the process the generation of neural, first, seed (seeds) comprising a basic circuit (species circuit) has generated, then the beginning of some species circuit, it is found together will dock with each other It is thought that it will grow into a more advanced circuit in the form.

● Neural circuit connection and novelty

Human learning creates connections (plastic synapses) between neural circuits . In this case, the neural bonds generated by learning, new Tadashisei (until now, in someone, already whether they exist) from the viewpoint of,

(1) Precedent: A neural circuit connection that already exists in someone's nervous system and can be copied by communication from another possessor

(2) Inventions and discoveries Neural network connections that were not present in anyone else's nervous system and were generated for the first time by a trained person

Of 2 can be divided into type.

In the invention / discovery of (2) , the greater the distance between circuits that are likely to be connected to each other, the greater the invention / discovery.

The neural circuit connection corresponding to the invention / discovery becomes the precedent of (1) from the moment when it is copied to another person .

● Origin of neural circuits and socialization

Neural circuits that respond to human acquired learning behavior

(1) Derived from the external society A normative behavioral mode that already exists from the external society in which the born human being is embedded = internalizing neural circuits = copying externally into the brain where wiring has not yet been generated), And

(2) individual internal origin in human individuals of the central nervous system system, if that is generated in the "intrinsic" as a new neural circuit = new ingenious behavior by chance in the course of trial and error,

You could think so. Conventionally, (1) has been described with the concept of "socialization."

New neural circuits created internally in (2) are copied one after another in the surrounding human brain, and by replacing old circuits, social changes such as innovation and revolution are created. it is conceivable that.

Traditional sociology focuses solely on the internalization of individuals in (1) the external behavioral styles that already exist in society, and (2) the new internalization that arises in the individual's brain. It is thought that there is not enough consideration about the influence of social behavior = transmission around the neural circuit on society. Social → or to follow the only flow of the individual only by, or would not overlook the flow of the individual → society ?

It is considered that neural circuits distributed in society have been repeatedly copied from brain to brain over generations, over generations. Looking back at the history of this circuit copy , the first culture, acquired neural circuit development, clearly originates in novel synaptic connections and plasticity in the brain of a single

individual. It Communication around the human being copied experimentally by emissions, the efficacy tested further and spread copies to a wide range of others in the brain if effective, more is performed copy between generations It can be said that it has been passed down to the present .

The culture that is already in the external society and has been considered to restrain human beings externally is also derived from the individual's psychology of the functioning of the brain and nervous system if you follow the source of the copy source . New cultures (ingenious behaviors) are always born within the individual's internal nervous system. The origin of culture lies in new connections between neurons in the individual's brain nervous system. In that respect, culture is brought about by the psychological activities of individuals, and it is impossible to be external to society from the beginning.

It is impossible for society to create its own culture without being based on an individual's psychological activities (the work of the cranial nervous system) . Each time a neural circuit is passed between individuals by a relay , a new circuit is assigned in the brain nervous system of each individual who received the neural circuit, and the assigned part is copied to other individuals , statements in the form of reduction is going to develop. The creation of culture (addition of new neural circuits) is a unique psychological process within the individual.

From the perspective of society as described here, society can only transfer neural circuits created within individuals that are effective for environmental adaptation to multiple other human nervous systems (who do not yet have those circuits) . It is only a means for distributing properly. Society is nothing more than a bridge / connector that connects the nervous systems of each independent person . Society itself

as a means of communication between the individual nervous systems does not have the ability to create new cultures. It is the individual's nervous system that creates a new culture .

Therefore, the concept of "socialization" is, more precisely, that a neural network that is plastically generated by learning from the neural systems of others surrounding one's own, by communication, Should be considered as being copied into the system.

At first glance, the `` culture '' that appears to the individual to be beyond the psychology of the individual is actually distributed in the brain and nervous system of the surrounding (society) people surrounding the individual In its form, it exists "lively" as a neural circuit that performs a particular pattern of behavior. Neural circuits corresponding to a certain behavioral mode, which are dispersed and exist , can freely walk between a plurality of human nervous systems by establishing communication (communication line) between individuals .

Required for socialization to occur 2 is one of the requirements, 1) is copied, dissemination of nerve circuits corresponding to the individual behavior, it is impossible to do in one person alone, the peripheral multiple corresponding to the others of the circumference that humans = requires the presence of nervous system, "multiple requirements", 2) to neural replication between two or more individuals is carried out, 2 for people communication with (communication) necessary to establish a , and the society, only the communication time (communication) regarded al as virtual connector group connecting line is a "communication requirements" referred to.

These requirements are the activities of the nervous system, which is an individual's psychological process, which keeps the neural circuits that correspond to the behavioral forms alive and disperses them to others as needed . Never contradict the notion that the culture held in it can be broken down into individual psychology. A framework that goes beyond the individual's psychological sociological view that not capture the "socialization" and do not be is wrong.

● Return to the social nervous system

"Social is the individual's psychology is unique that can not be reduced" discourse that (emergence assertion of society) is, conventional, fundamental presence give the identity of the sociologist has worked as a standing reason.

Certainly, the function as a connector that connects the nervous systems of society cannot be established only by the individual's nervous system, but only when a communication relationship is established between two or more individuals . In that sense, it is true that there is a point in society that cannot be reduced to the personal psyche. However, are exchanged through the connection connector Ru, culture to determine the specific movement of society (= collection of human behavior) the contents of the ("Conte in the content business, such as, for example, books, movies, animation Ntsu contents ") is, nerve It belongs to the individual's nervous system as a circuit, and in such a point, it is impossible to grasp society without the psychology of the individual .

In other words, the content = cultural content is all distributed in the individual's nervous system = "heart", and society is the content transmission between individuals, connecting between the individual's nervous system = "heart" □ It is regarded as a distribution channel.

Heretofore, the function of the nervous system has been hardly elucidated, and has been turned into a black box. Therefore, conventional sociology must consider the nervous system out of the framework of theoretical construction, and as a result, it is thought that a theory has been created that ignores the psychological process of individuals. However, knowledge about the human nervous system to the Akatsuki, which saw has been sufficiently accumulated, reducing the contents of the movement of society in the work of an individual's psychological = nervous system, be regarded as a collection of individual psychology, sooner or Is it necessary sooner ?

● Phenomenological sociology and neural networks

In phenomenological sociology,

• In everyday life, people think that others do exist, have the same consciousness as themselves, and see the world in the same way. As a result, it is believed that people have a common view (intersubjectivity).

This is the case where people think that each other has a nervous system with common functions and shape patterns, as well as others. In this case, the intersubjectivity corresponds to a common neural circuit site or pattern existing between the nervous systems of people.

- reality (Reality) and is not intended to present objectively, considered to be taken in conjunction with individual subjectivity. The relationship between knowledge and the individual that creates "reality"

(1) externalization (externalization)   human works on the world, the course of realizing the self (the production of new knowledge)

(2) Objectivation The process in which the outcome of human activity becomes external to the original producer and becomes an objective reality (institutionalization of knowledge)

(3) internalization (internalization) institutionalized reality is is not taken Some of the individual's consciousness, (the inner surface of the institutionalized knowledge subjective reality to become the course of the individual reduction)

It is said to take such a stage.

If this is replaced with the function of the nervous system,

(1) Externalization means that a specific neural circuit shape or pattern (subjective content) of a certain person's nervous system that he or she wants to copy or disseminate to the outside using a motor organ, Stamp on media outside the system.

(2) Targeting refers to the content and shape of a neural circuit imprinted on media outside the nervous system as objective reality.

(3) The internalization means that the content and shape of the externally imprinted neural circuit are read by sensory organs of the nervous system, and the read new neural circuit of the person (or reinforcement of the existing neural circuit) It is established in the person's nervous system.

It can be said that it shows the process.

◇ Culture and nervous system

1987-2006 first appearance (2014 supplement)

● Learning and plasticity of neural circuits

The connections between neurons, from a learning perspective,

(1) Fixed = instinct (heredity)

(2) Plasticity = culture

There are two ways.

The instinct can be said to be a congenital and genetically-generated non-plastic part (part that does not change by learning) in the static wiring between neurons in the brain nervous system .

Culture, on the other hand, can be said to be a part of the static wiring between neurons in the brain nervous system that has been plastically acquired (a part created by learning) .

Learning is the plasticization of neuron wiring.

The brain of an individual can be regarded as a hangout of such a neural circuit, or “neuron pool”. Society can be viewed as a collection of these individual active neuron pools and the interactions between them.

● Neural network topology

The overall shape, geometry, and topology of a neural network in a person's nervous system (Neural Network Topology) = The shape pattern of a huge (neural) network caused by the chain of connections between many neurons, Determine behavioral patterns, including nervous system functions and social behavior.

Of the neural circuits that determine human behavior patterns, the part that is genetically determined in advance

is the innate circuit, while the part that is determined by learning is the learning circuit.

Conventionally, there is a view that the meaning of the circuit is determined by the relative relationship between the firing of a certain neuron and the firing of all other neurons (Mach's principle). Alternatively, there is a view that the firing of each neuron corresponds to a certain external stimulus (color, shape, ...) (reaction selectivity).

On the other hand, emphasis is placed on the relative or absolute position and site occupied by each neuron in the huge neural network composition constructed and constructed as the whole nervous system, and the entire nervous system = the neuron occupied by the whole neural network. The idea of neural network topology is that the position and location determine the meaning of the neuron and what kind of external stimulus the neuron responds to.

● Cultural content = neural circuit geometric pattern

It is thought that the culture as an action pattern acquired acquired by learning can be expressed as
a three- dimensional shape of a neural circuit = a geometric pattern.

In that case, there are probably a finite number of basic neural circuit patterns, and it is thought that any culture can be expressed by a combination of those basic neural circuit patterns.

That is, for example, the same idea that Japanese culture can express any new content by combining a limited number of Japanese words.

In this regard, it is extremely important to identify the geometric patterns of the basic neural circuits that form the

basis of all cultures in order to elucidate the relationship between the nervous system and culture .

A new culture is expressed as a new deformation, mutation, or new addition to an existing neural circuit's geometric pattern.

The above idea can also be applied to elucidate instinctual behavior patterns corresponding to unplastic neural circuits.

The background of the above idea can be summarized as follows.

Human behavior patterns (instinct and acquired) can be expressed by a combination of a finite number of basic behavior patterns, and all behavior patterns can be reduced to individual basic behavior patterns. Basic neural circuit geometric patterns corresponding to such basic behavior patterns exist in the nervous system in advance (instinct) to acquired learning (culture). The whole nervous system is formed by connecting such basic circuit patterns to each other like a block and stacking them.

● Cultural element = plastic synapse

The culture, and Ho' to the definition of a conventional sociology, "within a social group, patterns of acquired-formed behavior of each member (behavior) " If viewed as a "statement of element (a posteriori The smallest unit of behavioral style decision by learning) can be considered to be a synapse that plastically controls the sign, strength, and strength of connections between neurons .

Plastic and static connections by synapses in neural circuits are cultures, and impulses run on them to create dynamic acquired learning behaviors.

● Relationship with the concept of "memes"

In conventional biology, genes are considered as targets for environmental selection. In this case, they have if they were selfish intention gene itself, its much as possible the duplication can be considered as if they have the property of an attempt to spread only in a wide range, and perpetuate. This property has been described by the term "selfish gene."

Some believe that the properties of this gene apply directly to human culture. In other words, the smallest unit of human culture is understood as the word "meme", and this "meme" has the property of replicating itself among as many people as possible, multiplying, and surviving. Is what it considers.

By applying the concept of "cultural element = plastic synapse" to the explanation of "memes" above, we think that the entity of "memes" is a plastic synapse or a neural circuit containing it. be able to.

● Culture location

Human culture is distributed in each person's nervous system. If they were external to appear independent landscape, buildings, books, etc., in fact all, human beings inside of the nervous system
activity (information processing etc ..) is a product of, the point, the human culture, inside each person of the nervous system It can only be said that there is no external presence. Same content (text, music, etc.) are also
God when the individual with each other through system of way are different from each other saw and heard is, look to something different at all (hear) the possibility can not be denied the.

Human culture exists only in the brain. At first glance and human television seem to exist outside the body image, such as a mobile phone hardware, visual and tactile of all the human brain is for the first time captured by the action of sense.

● Dissemination of culture

Specifically, the human culture takes the form of a neural network indicating a behavioral style and spreads in the brains of a plurality of living humans one after another through communication between humans . In other words, culture is copied from one human brain to the other as a neural circuit corresponding to a certain pattern of human behavior . Nowadays, the copying of such neural circuit patterns from brain to brain is instantaneously and efficiently performed by tens of millions to hundreds of millions of people , mainly through communication and broadcast media. I have. The neural circuit culture, which is distributed across multiple nervous system , creates commonality in the brain wiring of each person, and is a source of sympathy and psychological solidarity between humans.

Behavior, the contents of the neural circuit, which corresponds to the culture, outside the body of metal or plastic, is stamped, such as the electricity distributed in the market, in addition to the human brain to that received it Oite its stamp of content analysis and interpretation = A new construction of a neural circuit corresponding to the inscription is performed, and the new neural circuit is reproduced in the received human brain. This is the process by which a uniquely created culture spreads through multiple human brains.

◇ Circuit commonality, community and nervous system

1987-2006 first appearance

● Similar consciousness and commonality of neural circuits

It is considered that the owners of the same idea share the same neural circuit with each other, or have the same (or similar) neural network structure .

When one human feels the same consciousness in behavior as the other human, it is considered that there is a common part in both neuron wirings.

Those who have the same idea are considered to have a common neural circuit (wiring of the nervous system) .

● Differences in neural circuits

When comparing the nervous system between multiple humans, neuron wiring = how neurons are connected

(1) Same = common

(2) Difference = non-common

With 2 divided into ways.

If multiple humans have different neuron wiring in their nervous system,

(1) Mutual complementarity = system relation. They have a special division of labor. When the neuron wiring of each person is added, the whole social system is formed by cooperation between different parts.

(2) He is heterogeneous, cannot understand (understand) , and is in an alienated relationship.

Between others

(1) If the neuron wiring is common, they can understand and empathize with each other and live in the same living world. There is a sense of unity and warmth.

(2) On the other hand, if the wiring is not common, you are living in a world different from each other.

● Value differences and neuron wiring

In the nervous system between a plurality of humans, even if the corresponding parts have the same neuron wiring, the way of connection between neurons is

(1) Affirmation (promotion)

(2) Negation (suppression)

May show the opposite logic. Physiologically, it corresponds to two types of synapses : promotion and suppression .

This is the emotional aspect

(1) Pleasure

(2) discomfort

Related to

If the connection between neurons is positive, it indicates that the connection is pleasant, and if it is negative, it indicates that the connection is unpleasant.

The positive / negative connection between neurons is

(1) Valuable value

(2) worthless

Is related to the determination. If the connection between neurons is positive, it is regarded as having a value, and if the connection is not, it is regarded as having no value.

The difference in values among multiple people is

(1) There is no common circuit. This means that there is no common topic. Indifferent to each other.

(2) The circuit is common, but the positive / negative relationship = the pleasant and unpleasant feelings of emotions are opposite. Opposite, with shared interests but conflicting opinions. Show that your values are in conflict with each other. The connection of the long-term memory circuit is common, but the way of adding value by emotion = the way of promoting / suppressing synapses is different.

Conflicts (conflicts) occur when there is a part in the neural circuit of each person in which the relationship between promotion and suppression is exactly the opposite, and the opposite parts are simultaneously activated.

● Interpersonal humidity (dry / wetness) and neural circuits

Those who have a common neural circuit feel like one another, "Oh, I'm the same as the other," and are psychologically attracted to each other. In social movements, people who share the same slogan work together as a group and act as one because they have a common neural circuit and therefore feel homogeneity with each other. It is a manifestation of what is becoming.

In this regard, the commonality of the neural circuits that people include can be said to bring about the interpersonal wetness of people sticking, solidifying, and uniting with each other.

On the other hand, if you feel that the neural circuit you have is different from others, you feel that you are a separate entity away from others.

In that regard, it can be said that the difference in neural circuits included in people brings dryness in interpersonal relationships, which are discretely separated from one another.

● Community formation and neural circuits

It is thought that those who have a common neural circuit and have a wet consciousness can form a community where they can understand each other and come together with friends who can understand each other.

● Social integration and neural circuits

Those who belong to the same society and the same nation are considered to have a common memory and a common neural circuit. It is thought that the commonality and the identity of the neural circuits that each has will enable the integration of society based on them.

Alternatively, having common neural circuits with each other is considered to be a proof of membership in the society.

◇ Social division of labor and nervous system

1987-2006 first appearance

● Function, occupation and neural circuit

People who perform the same function and who have the same occupation share the same neural network with each other, or have the same neural network structure (or approximate)) .

Owners of neural circuits responsible for important functions in the survival of people can be said to be more socially valued and higher in status.

● Social division of labor and neural circuits

People who are in the division of labor have different neural circuits. However, just because they have different neural circuits does not mean that they are independent of each other.

The neural networks of each person in the division of labor correspond to each other's environmentally adaptive behavior that others do not have. In that regard, each person's neural circuits take into account providing each other with circuits not possessed by each other, and in that respect are complementary and related to each other.

By adding the neural circuits of the people in each division of labor, all (behavioral) functions necessary for human adaptation to the environment are provided, and a large and almighty nervous system is created. This is the whole society.

● Dense and dense neuron wiring

Neuron wiring is

(1) High density (dense)

(2) Low density (coarse)

Of 2 There are ways, this is the owner of neuronal wiring indicates the degree of specialization to specific areas.

If it is dense, the owner of the neuron wiring knows more about the area to which the wiring corresponds. I am making my own details. A detailed response can be made. Expert in the field.

If it is rough, the owner of the neuron wiring knows only roughly the field to which the wiring corresponds, and can only give a rough response, and is an amateur.

Differences in the distribution of neuron wiring between people indicate that there is a division of labor between people. Each person has a limit to the number of neurons, so one person is familiar with all fields = it is not possible to make neuron wiring dense in all fields. Therefore, it is necessary to make a field having a high neuron wiring density different for each person, and to have another person having a high neuron wiring density help in a field having a low neuron wiring density.

For a child who is still growing up and is still in the middle of basic learning, neuron wiring is only basic and considered relatively coarse. As the learning progresses, it is considered that detailed wiring more suitable for the professional ability is formed in a form branched from the basic neuron wiring.

In addition, people with low social status often lack the ability to acquire the behavioral pattern necessary to lead a fulfilling social life = neural circuits, and lack that ability. Or, if you have a neural circuit that's so detailed and professional, it's useless and useless if it's of little use to others (like a graduate doctor's part-time worker). To) .

◇ Communication and nervous system

1987-2006 first appearance

● Communication and copy of neural circuit

Communication is generally the transmission of information or messages from one person to another. From a neural network perspective, communication can be thought of as a copy of a neural circuit from one person to another, or a two-

way exchange of neural circuits. It is considered that the person who transmitted information (sender) and the person who communicated (receiver) share the same neural network. It is considered that the exchange of neural circuits between two or more people is the actual state of communication behavior.

● External “engraving” of media and neural circuit contents

Neural circuits are effective only in vivo. In order to copy a neural circuit of one person to another person, the content of the neural circuit needs to go out of the living body once. Media is used to exchange neural circuits between one human and the other. Media is physical , mediating the copying of neural circuits between two parties. One man, the contents of the neural (content) , and the other man, as correctly copied possible, "stamped" on the biological external substances. The other man is, on the basis of the contents of one of the human beings have been "stamped" to the media, in my head, or newly generated neural circuit corresponding to the marking content, (If you already spent learning) Or reactivate.

● Concept of information

The information is some kind of pattern that is “engraved” on a substance outside the living body and can be sensed by the senses of the living body. For example, apple fruit produces red for human vision and appetizing smell for smell. It often has content related to the life and death of living organisms. The living body generates and reactivates a neural circuit corresponding to existing information each time.

In order for the “engraved” information to function effectively (transmitted from the sender to the recipient) , the side that “engraves” the information on the external

substance and the side that receives the “engraved” information content have a common You need to have a neural circuit. For example, if you want to pass on the information that "apples are delicious" from one side to the other, both the sender and the recipient have a common knowledge and understanding of the Japanese hiragana string "apples" and "delicious" = common If you do not have a neural circuit (for example, a foreigner who does not know Japanese) , the meaning will not be transmitted correctly, that is, the correct copy of the neural circuit that connects between "apple" and "delicious" will not occur. Conceivable.

Understanding indicates that others have successfully created and constructed a new neural circuit in their own head that corresponds to the content imprinted on a substance outside the body (such as a paper notebook) . In other words, understanding can mean that an exact copy of a particular pattern of neuron wiring occurs from one individual to the other. In the case of an incorrect copy, it is a misunderstanding.

● Relationship with mass communication

In mass communication such as television, a neural circuit built in a sender's own neural network is simultaneously transmitted and propagated to a large number of people's neural networks.

◇ Social movement and nervous system

1987-2006 first appearance

● Social movement

Social movement is the act of one or more people trying to change the neural network structure of others around them to what they want . It is an action to spread the partial circuit

of a neuron that is considered to be affirmative in its own nervous system to the surrounding neural network of as many other people as possible and to transmit it.

● Synchronization behavior

Tuning refers to each person changing his or her own neural network configuration to the same configuration as that of another.

◇ Environment and nervous system

1987-2006 first appearance

● Neural circuits and environmental adaptation

The neural circuit is

(1) related to function generation (necessary for environmental adaptation)

(2) related to functional consumption

Of 2 divided into ways.

In this case, the function is a general term for the functions necessary for humans to adapt to the environment and survive. It is divided into circuits related to the generation of functions necessary for humans to adapt to the environment, and circuits only for consuming functions created by others. The circuits corresponding to the abilities required to draw comics are separate from the circuits necessary to read and enjoy comics. In the former case, it is necessary to have a drawing function or ability.

Neural circuits, in the relationship between humans and the environment,

(1) Create effective actions for environmental adaptation

(2) Creating invalid behavior for environmental adaptation

There are two ways.

Understanding the macro-wide society from a micro perspective

First appearance in 2006

It is possible to apply the concept of society from a micro perspective to macro understanding of society as it is.

A huge network of nervous systems formed by connecting and linking the nervous systems of each person connected to each other microscopically can be regarded as the whole society.

In this case, the whole society can be said to be a network formed by connecting each person's nervous system without any consideration.

From this perspective, it can be considered that the way of thinking of micro society and the way of thinking of macro society are not separate things but continuous.

◆ Other

◇ Thinking, knowledge, intention, consciousness and the nervous system

1987-2018 First appearance

● Thinking field and knowledge field

In conventional neuropsychological, the action of the nervous system, sensory areas to receive stimulation from the outside as an input, there is motor cortex to perform active output to the external, the 2 Union as causing a coalition between the two The field has been considered.

However, in my opinion, this concept of association area is merely a link between sensory and motor areas, and its substance is

(1) A part as a network-type database that accumulates experience / knowledge about the external world extracted from the "knowledge field" sensory cortex, and experience / knowledge about accurate and efficient movement styles

(2) "Thinking areas" A part that searches, matches, and evaluates knowledge areas as a network-type database, and tries to connect unrelated neurons with new ones for things not found in the knowledge areas.

The signal coming from the sensory cortex is likely to go around in the head for a while without going out to the motor cortex immediately. It is considered to be.

In the "thinking area", if no effective connection for solving a problem is found in the conventional knowledge area, a connection is created between new neurons that have not been connected until now, and the connection is actually created. If it is enabled, it will predict and simulate what will be done. If it does not work, stop combining and try another combining. On the other hand, if the result of the simulation is OK , the connection is provisionally determined. Through the action of the motor area, an output corresponding to the connection between the new neurons is actually output to the outside, and the feedback such as the reaction of others is obtained from the sensory area. If the feedback evaluation result is OK , the new interneuron connection is incorporated

into the conventional knowledge area as a part of the newly obtained effective knowledge.

Decision making field (motivation field)

Actually, it is necessary to assume other things, such as a `` decision ( decision ) field '' or `` drive field '' , which determines the direction of travel independently and takes active action. Can be This is the motivation for thinking and knowledge accumulation. Human beings, as living beings, take voluntary actions to sustain their lives (fire, etc. when they get cold), but somehow believe that the source of such independence exists in the nervous system. It is necessary to make assumptions in the form. The author thinks that this is the “field” responsible for “decision (decision) ” and “motivation drive ”.

● Consciousness and unconsciousness

The state of consciousness is a state in which the neural network receives the state of the external world surrounding it by sensation and perception, and explicitly controls a task of causing a reaction considered to be effective for survival. Consciousness behavior is the behavior that the control spot is hitting.

The unconscious state is a state in which the neural network does not receive a challenge from the outside world and does not output a behavior or the like to the outside world. Of these, the dreaming state is a state in which the firing chain of each neuron turns around inside the neural network and is completed. Cerebral infarction and brain death are unresponsive states because neurons in the brain have died.

An unconscious action is a reaction output of a neural network that is uncontrollable or unknowingly out of the range of the control spotlight, in a conscious state.

● Existence of action control

A neural network is composed of a control subject, a leader who controls the actions taken, a follower who takes specific actions in accordance with those controls, and an independent person who independently performs an independent action (network firing) instead of either. Divided into three departments. The factors that cause unconscious behavior are independents or followers who automatically move themselves without reflecting the leader's will.

● Concentration and carelessness of thinking, human error

In the neural network, the leader's department first receives the sensations and perceptions from the outside world, then decides the content of the response to it, and finally executes the response, but the attention is not concentrated on the sensation and perception However, the user may face another place, or the content received from the senses and perception may be out of focus or coarse. This is similar to shooting with a camera. Also, when deciding on a reaction, I often think of other things that deviate from the original purpose and intention. Alternatively, when a reaction action is performed last time, a malfunction may occur, in which the user may inadvertently become distracted and cannot respond completely.

In short, neural network leader departments need to be able to (1) sense and perceive the receiving phase, (2) determine the response and (3) execute the reaction, It is necessary to have the necessary abilities and to concentrate and maintain concentration. The resources for concentration are limited: (1) a certain pole, focus on the target, focus, degree of spotlight, (2) concentration in a moment, degree of concentration resolution, (3)) The degree of continuation of concentration itself needs to be increased, but each has its own limits. This is similar to moving image shooting by a

video camera. If you cannot concentrate in each of the above, you will become careless and eventually fail in the desired action. This causes a human error.

In the exchange of behavior between multiple neural networks, the ability of each neural network to regulate the concentration of this thought, together with the ability of each neural network, is the key to successful behavior in an organization. I can say.

◇ Memory, emotions and nervous system

1987-2018 First appearance

□ □ Relationship with memory

● Length of memory

To connect neurons,

(1) Long term

(2) Short-term

There are two ways. If the connection lasts for a long time, it corresponds to long-term memory. If the connection disappears in a short period of time, it corresponds to working memory = short-term memory.

● Objectivity and subjectivity

The neural circuit is

(1) Correct or incorrect Objectively correct or incorrect

(2) Beneficial and futile Objective, useful for your survival (plus), ineffective (harmless, harmful)

(3) Pleasant / unpleasant Seeing subjectively, likes and dislikes

About whether the contents of each neural circuit and neuron are correct by individually linking to each neural circuit and neuron that holds the result of analyzing sensory perception results, or by chemically changing each neural circuit and neuron Instantly judge whether it is useful or not, and retain the result.

For this,

-There are neural circuits that play a central role in the judgment of correct / incorrect judgment, in the center of useful / futile judgment, and in the center of likes / dislikes.

-Neural circuits and neurons have different flags for true / false judgments, useful / futile judgments, and likes / dislikes judgments.

There are two ways.

● Memory and emotion

The relationship between memory (long term) and emotion (pleasant / discomfort)

(1) I remember something in an uncomfortable state

(2) It is uncomfortable to remember something

Since the above two conditions hold, it indicates that the neural circuits responsible for each are connected in both directions.

◇ About social field

1987-2006 first appearance

The part of the human nervous system where knowledge and experience about society are written can be regarded as a "social field". At that time, the social field further

(1) "Communication field": A field in which knowledge and experience related to communication, which is an interaction with others, is written and thoughts and perspectives are written.

(2) "Social recognition field": A field where people write knowledge / experience about the part-whole society that is an aggregate of others other than themselves and their relationship with oneself, and think and prospect.

Can be divided into

(1) Communication field

Necessary for society occurs 2 is a
requirement, 1) interaction with others is not possible to perform in one person alone, that requires the presence of others more than one person around,
"other 2) "Communication" means that in order to interact with another person, it is necessary to establish
a communication (communication) relationship with the other person. Of these, the basis of the assertion of the emergence of society is “communication” in 2) .

Actually, the communication process with two or more other people, which is the minimum unit of society, can be divided into neural circuit exchange activities of the nervous system of each of a plurality of people who perform communication.

To establish a communication relationship, first, a message is sent to the other party that he / she wants to communicate (if the other party does not respond, a certain number of reminder) . When the other party returns OK , it is

assumed that the relationship has been established, and the message transmission to the other party is started. When the transmission is completed, the communication is terminated (interrupted) . It can be said that communication from the person to the person is established by taking a noticeable action that causes the person to cause some kind of attention reaction to himself. Establishing communication and transmitting a message are preferably performed in both directions, in order to confirm that the content desired to be conveyed to the other party is properly transmitted.

Once communication is established, a neural circuit in one nervous system is output in the form of a symbolic message out of the body, and the other nervous system decodes and obtains it. At that time, in order for the other party to be able to decode one of the symbols, it is necessary for both parties to understand in advance what the symbol means. It is necessary to have common knowledge, which is ultimately the commonality of the senses at the genetic level of mankind (apples are, in principle, commonly seen by mankind as red and round shapes) , that is, It is thought to be derived from the commonality of innate neural circuits in human brain sensory areas.

The task of separating communication into individual units as an individual's psychological process is, specifically, an MRI that measures which part of the cerebral nervous system is activated when a human communicates with others. Measures independently for each individual using a device such as the above, and by communication type (each stage from the start to the end of the communication, abundance of conversations, the content of the topic, the degree of likes and dislikes of the other party, etc.) It is thought that it is possible by classifying them into. When such interaction by communication with others is performed,

it is assumed that a specific part of the nervous system, what should be called a “communication area” is activated. That is, the "communication field" connector is built between individuals (Tei) said part which activates only when Ru is a moiety that activates when communication with others, and.

The “communication field” as a kind of “social field” in the nervous system is a key element in elucidating how “connectors” that create connections between individuals are created. Is n't confirming the existence and working of the field an important theme not only for neuropsychology but also for sociology in the future ?

(2) Social recognition field

The social cognitive area is regarded as a part of the nervous system that writes knowledge and experience about the part of the whole society other than oneself to the whole society and the relationship between those societies and oneself, and thinks and prospects. . What is going on in this area is what happens for each relatively micro-partial community that is part of a larger whole society, such as families, schools, companies, and communities, and for more macro-wide societies, such as states, ethnic groups, and the world. It can be said that it is a part that records and analyzes the relationship between each other, and considers the direction in which it is desirable to proceed, and performs the work of executing it.

There are various types of social relations, from the territory, blood and circles, the workplace to the Internet, and it can be said that the accumulation of knowledge and thought results about these is the social cognitive field.

This social cognitive field can be regarded as a part that is activated when a concept related to social relations comes in from outside.

◇ **Possibility of motorized nervous system**

1987-2018 First appearance

The conventional organism-human nervous system can only survive if the temperature is within the range that can exist as an organism, and if food, oxygen, and the like are ready.

So, the environment is rapidly changing human-friendly, if you no longer food and oxygen, how the conventional human it is sufficient to survive a nerve circuit as a knowledge that has been integrated into the body nervous system ? One of the answers To move the neural circuit of the living nervous system to the motorized nervous system, which is powered by electric power.

In this case, the motorized nervous system refers to a neurocomputer driven by electricity instead of a conventionally used Neumann computer (or a neurocomputer simulation using a Neumann computer is OK). In the motorized nervous system, if the energy for its activity can be obtained in the form of electricity, the nervous system can survive. For example, the motorized nervous system can be easily maintained without oxygen or food if sufficient electricity can be generated from sunlight or geothermal.

Traditionally, it has been assumed that the essence of human beings is that they are firstly created by the action of DNA genes. However, I think it is more appropriate to view that the essence of humans lies in the higher nervous system itself, which controls advanced knowledge and thinking. This is because "brain death = cessation of nervous system activity" deserves human death and is a target for organ transplantation.

Replacing this highly functional nervous system from the conventional living body base to an electric / semiconductor base, and shifting it to “motorized” means that human beings can overcome the limitations of living bodies and open up a new world. Becomes possible.

For example, in the past, the size of the human brain as a living body has certain restrictions in order to act as a living creature, and this has limited human thinking and knowledge. However, with the electrification, the restrictions are removed, and it becomes possible to think as much as possible and accumulate knowledge. Alternatively, a human being as a living body is destined to eventually die, at which time the living nervous system stops its activity and disappears. However, by being brainstormed, you will be freed from the yoke of death and will be able to continue working semipermanently "invulnerably".

If the essence of human beings is not a living thing but a nervous system, the above-mentioned "motorized nervous system" can be a more advanced permanent nervous system than the human base of the living body. There is a good chance that it will be more “human-like” than the human being as a living creature, and will stick to the essence of the human being as a thinking and accumulating knowledge body.

At that time, it is important for the motorized nervous system to have an urge to live, in order to give the same function as the conventional living nervous system.

Conventional computers have been forced to have only intelligent, sober and objective perspectives, excluding the urge to live.

On the other hand, the new motorized nervous system needs to have an emotional aspect that has the urge to live to

survive.

The urge to live is an essential part of the creature, and it contains the desire to have sex and make a genetic copy of itself, to eat, to escape from enemies, to defeat enemies, or to defeat others. You want to control, make friends, or spread your thoughts.

By providing the motorized nervous system with a circuit corresponding to such an urge to live, the motorized nervous system tends to survive as a living creature.

Alternatively, it is necessary to allow the motorized nervous system to generate a neural circuit having a function desired by the user, or to have the ability to create a circuit or a nervous system of its own.

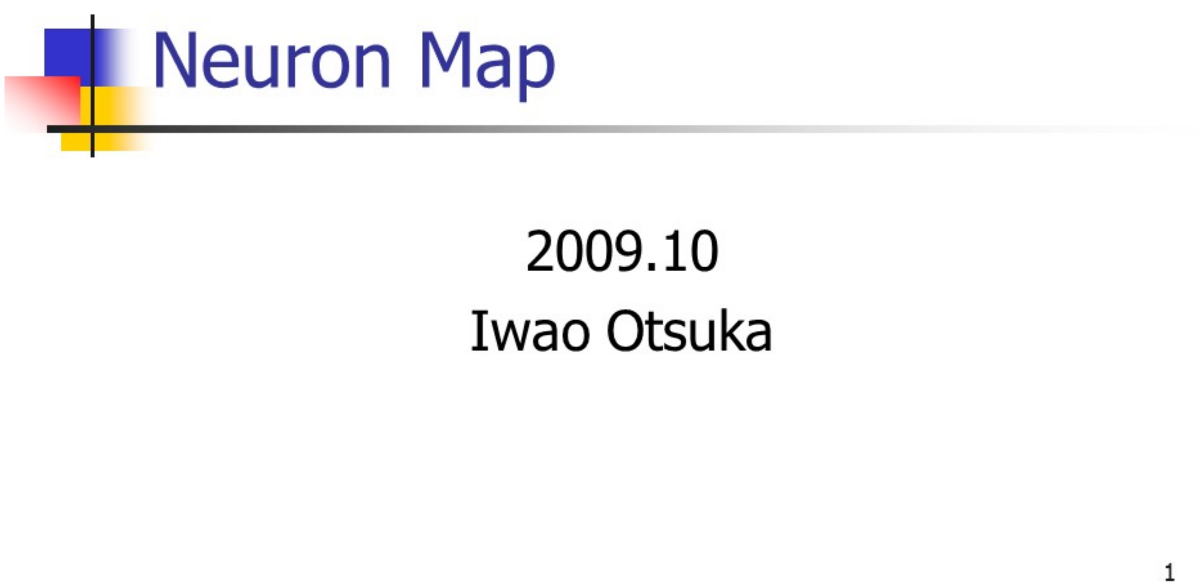
In order to make this work, it is necessary to use a neural circuit design technology similar to the current LSI design technology , such as using such a neural circuit, connecting this neural circuit and this neural circuit. It is indispensable to develop enough.

In this way, humans leave the motorized nervous system, even if the earth's environment changes drastically and human beings can not survive as living beings, there are still power and even the physical materials that create the motorized nervous system. In this way, human culture can be continued in the form of the motorized nervous system.

On the other hand, by interconnecting and expanding the motorized nervous system through stretched electric wires or radio, it is possible to remove the spatial limitations of the conventional living nervous system and to activate nervous system activity on an unprecedented scale. It becomes possible.

◇ **Neuron map**

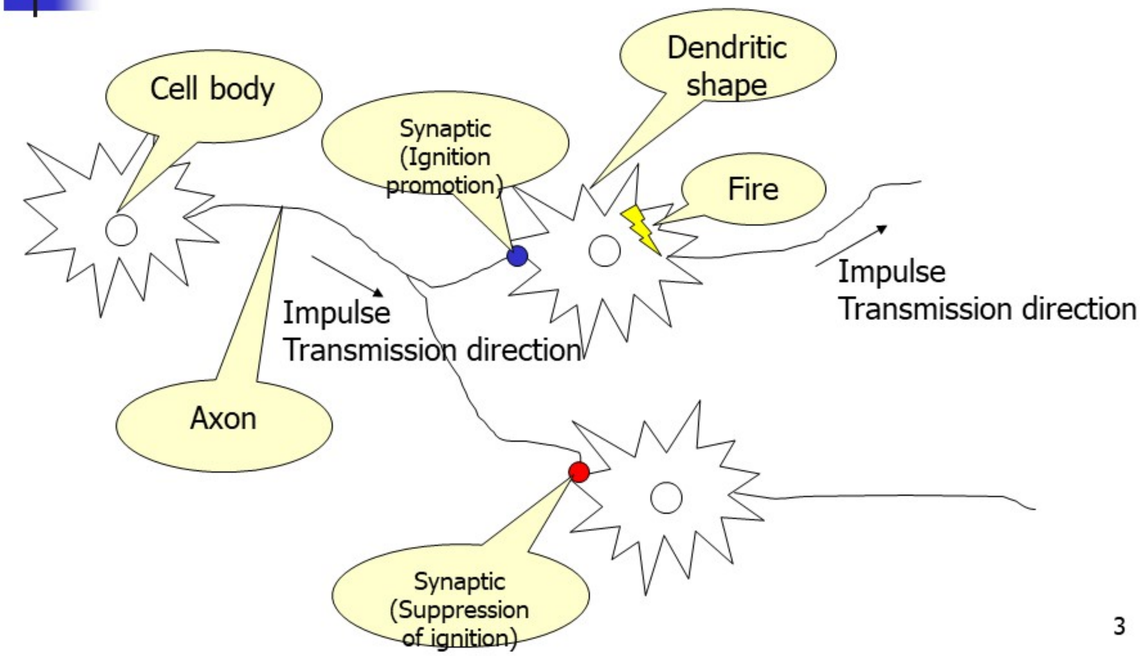
2009 First appearance



What is a neuron map?

- Human beings think in the brain nervous system.
- When human thought and wisdom are arranged, it becomes the neuron circuit of the brain nervous system.
- To summarize ideas such as sentences, it is effective to make a diagram describing the relationship between ideas in the form of a neuron circuit.
- This figure is called "neuron map".

Neuron circuit



How to write a neuron map

- (1) The contents of the thought are individually written in the cell, one at a time.
  - The objective facts and subjective opinions and feelings (intention, value judgment) are described separately.
  - The objective fact is that
    - Something that will be a plus for me (saved, useful...)
    - What becomes a minus (trouble, problem, obstacle...)

    It is divided into, and color-coded.
  - Subjective opinions and feelings (intentions, judgment of values) are
    - Positive positive things (like, good, likes)
    - Negative things (I don't want to, I hate it, no, I don't like it)

    It is divided into, and color-coded.
  - Depending on the importance of the content, the tint of the color is attached to the dark (important) to pale (unimportant).
  - With objective facts, subjective opinions and feelings,
    - own personal stuff
    - Other people's Stuff

    Separating and marking.
- (2) Each cell is connected by a line (equivalent to an axon) and is bound (equivalent to synapse).
  - The line type is
    - Causal one-way "hence" "
    - Related, correlated two-way

    Separating and filling out.

    - Activate or ignite a cell that is in a promoted destination
    - Suppressing the activity of the cell that falls to the destination and does not ignite

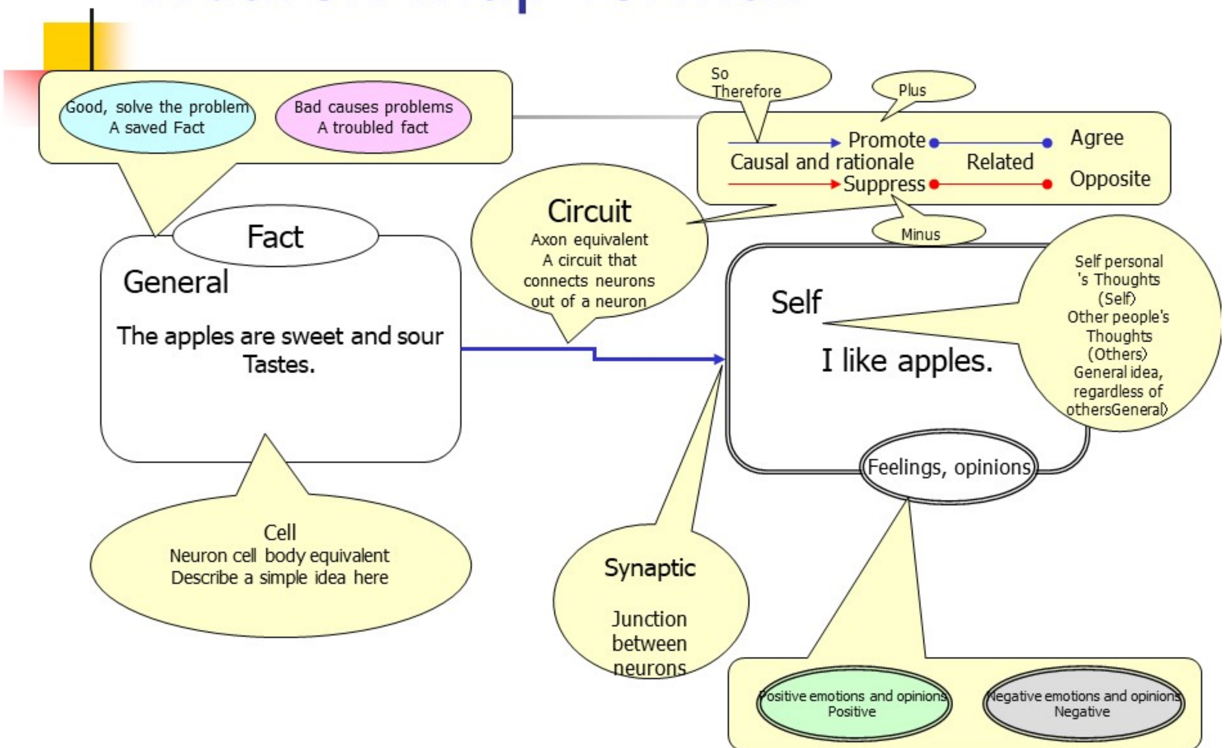
    In a separate form.

Software required to create neuron map

- Any software with drawings of the following functionsOk
  - Write a rectangle
  - Can I write a connector line connecting the squares together?
  - Can adjust shape, line color
  - Can adjust shape and line thickness
  - Can adjust shape and line pattern

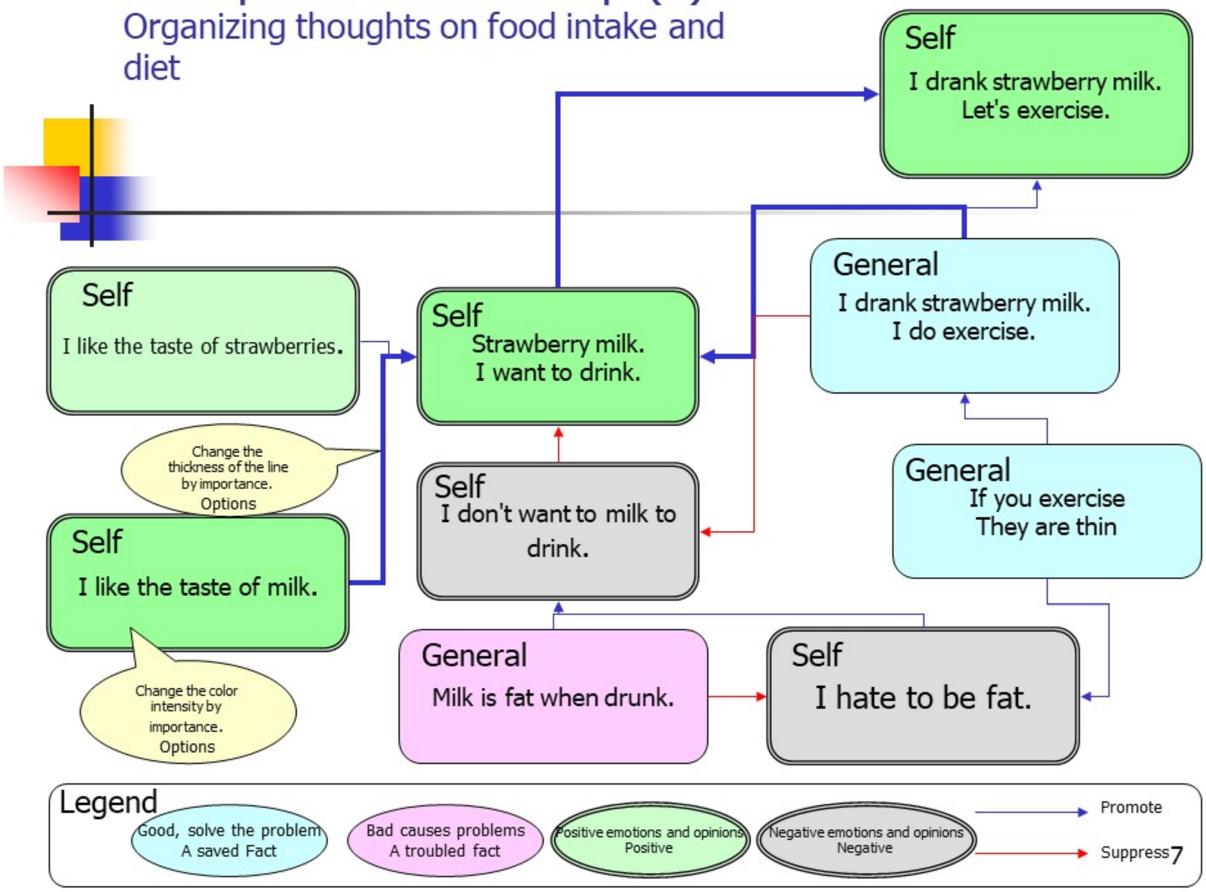
- Examples of software that can be created
  - Microsoft Excel、Microsoft PowerPoint
  - OpenOffice Impress

Neuron map format



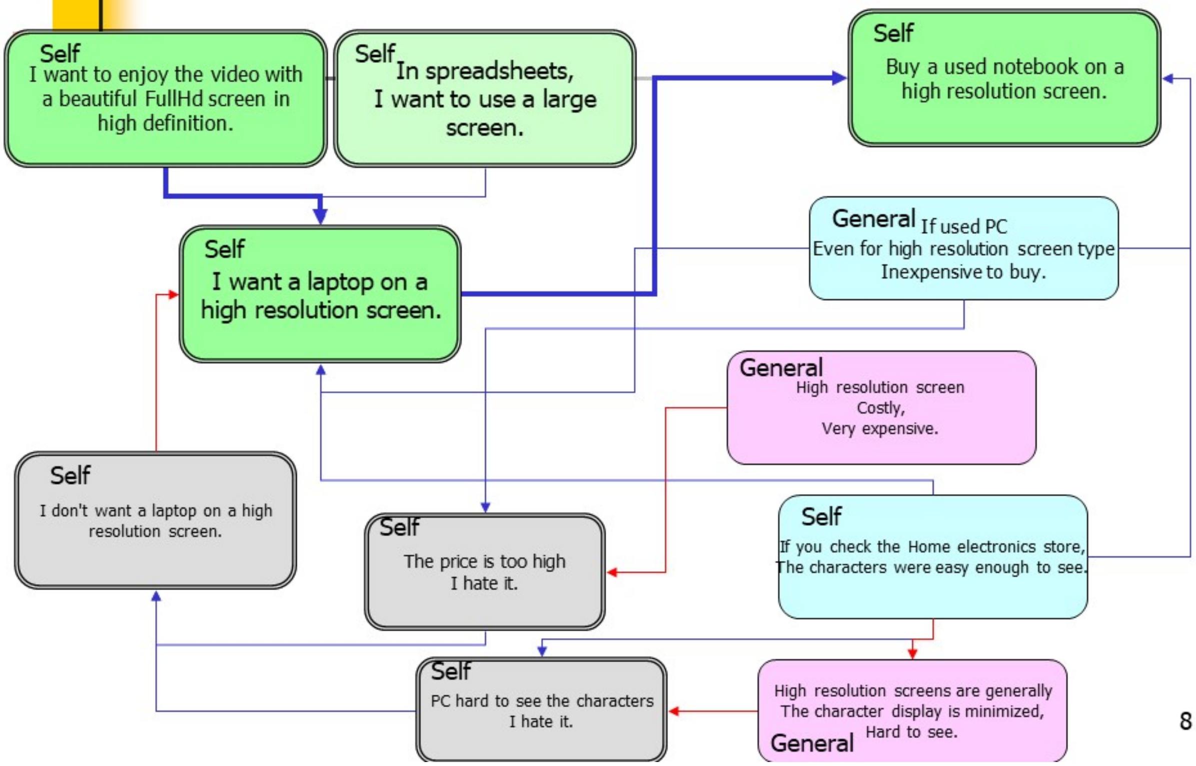
Example of neuron map (1)

Organizing thoughts on food intake and diet



Example of Neuron map (2)

High resolution screen consumer thinking about purchasing notebooks



The benefits of writing a neuron map

- By drawing a neuron map, the content of thoughts that you hold in your head is arranged, and it becomes easy to explain coherent to others. It becomes easy to summarize in sentences.
  - In my thoughtsWhat is a plus for me and what is the negative?Can be organized and clarified.
  - In my thoughtsWhat is an emotional, subjective opinion, and what is an objective fact?Will be able to argue, organize, differentiate.
  - In my thoughtsWhat is a problem and what is the solution?Can reveal the flow of what is going on with them and their own opinions.
  - Hold oneselfFeelings of likes and dislikes, positive negative feelings, "I want to do not want to do" intention, "○ ○ Good, bad" value standardCan clarify and organize what it looks like.
  - Mutual relation and flow of thought contentThe way of thinking becomes clear, and the flow of my thought is clarified, and it is possible to sentence it easily.
  - Not only logic, but also the content and flow of emotionscan be clarified.

Example of use of neuron map

- Psychological Counseling Support
  - The inner heart of the patient
    - The objective facts surrounding the patient
    - On the other hand, the feelings of the patient
  - To reveal and organize
    - What kind of prescription will help the patient (or counterproductive)?
  - As a technique to be able to share coherent with patients.

- Various product development Support
  - The circumstances and the intentions of the people and the company surrounding the product
    - Objective recognition of the market surrounding our company
      - Such products are useful and necessary
      - This kind of product is harmful, unnecessary
    - The feelings and intentions that we have
      - I like this kind of product, the feeling of being good
      - The intention to make this kind of product
  - Coherent and organize
    - Key persons inside and outside the company
    - The consumer who buys the product
  - As a technique that can be presented to the

Future of Neuron Map

- Elucidation and illustration of human brain neuron circuits
  - By writing a neuron map, it is possible to estimate what is the neuron circuit developed in the human brain.
  - It is useful for elucidation of the software of the brain nervous system.
  - Not only the intellectual and logical aspects, but also the aspects of emotions and intentions, can be clarified about the neuron circuit.

- Organizing the contents of human intellectual assets and the library
  - It promotes the illustration of contents written in various documents of the past.
  - It is easy to see and organize the various knowledge and feelings that the author has, and the judgment of value.
  - For example, is it effective for the content arrangement and the review of a great past?

- Neuron map and automatic sentence generation
  - When you click on the neuron on the diagram, it fires and the impulse transmits one after another.
  - Is it convenient that automatic tracking of the impulse flow of neurons on the